
Diffusion of Medicare's RBRVS and Related Physician Payment Policies

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In 1992, Medicare reformed its physician payment method by implementing the Medicare fee schedule (MFS), of which the resource-based relative value scale (RBRVS) is a major component. Using a recent survey and case studies, we examine the diffusion of Medicare's RBRVS to non-Medicare payers and how those payers use and perceive the RBRVS and MFS policies. We find that approximately one-third of payers that participated in the survey have adopted RBRVS-based payment systems in varying degrees while another 40 percent were seriously considering its adoption. Prospects for expanded use of Medicare's RBRVS appear favorable.

BACKGROUND

The rapid increase in health care costs has been a primary motivation behind many proposals to reform the U.S. health care system. While overall national health expenditures have increased from \$250 billion in 1980 to \$751 billion in 1991, national expenditures for physician services increased at an even faster rate, from \$42 billion to \$142 billion (Letsch et al., 1992). Potential reform measures for physician reimbursement range from capitated payments to negotiated payments for a specialized bundle of services to newly developed fee schedules.

The Medicare program took a major step to reform physician payment by implementing the MFS on January 1, 1992.¹ Medicare's reform provisions, enacted by Congress as part of the Omnibus Budget Reconciliation Act of 1989 (OBRA 1989), were motivated by several factors. First, Medicare program expenditures for physician services had been growing at rates that averaged over 13 percent since 1965. By 1991, Medicare expenditures for physician services—which constituted 70 percent of total Part B expenditures and more than 25 percent of Medicare total expenditures—had reached \$26 billion (Physician Payment Review Commission [PPRC], 1992). A second factor was the wide variation in physician payments across types of procedures, physician specialties, and geographic locations that developed under Medicare's customary, prevailing, and reasonable (CPR) charge payment methodology. Finally, concern about the impact of increasing financial liability on Medicare beneficiaries for physician services was another important factor for the passage of OBRA 1989. Out-of-pocket expenditures for Medicare beneficiary households (of which physicians' charges billed above Medicare maximums, or balance billing amounts, were a major component) were about 17.1 percent of household income in

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¹Physician fees are in transition between historical allowed charges under the CPR charge method and the MFS, and will be fully based on the MFS in 1996.

1991, up from about 10.6 percent in 1972 (Physician Payment Review Commission, 1992). To address these concerns, OBRA 1989 included the following provisions: (1) physician service fees derived using RBRVS;² (2) a cost-control mechanism—Medicare volume performance standards (MVPS); and (3) balance billing limits on non-participating providers.

The RBRVS serves as the foundation of the MFS and includes three resource components: (1) total physician work; (2) practice expenses; and (3) malpractice expenses. Each component is measured in terms of relative value units (RVUs). In the MFS, fees are based on RVUs from the RBRVS, adjusted for geographic input price differences, and multiplied by a national conversion factor to derive dollar amounts. The MFS also consists of accompanying physician payment policies.

The physician work RVU component was developed by Harvard University researchers and refined by HCFA (Hsiao et al., 1988, 1992; *Federal Register*, 1991). The work RVU for each current procedural terminology (CPT) code represents the relative value of physician work (e.g., time, physical effort and skill, mental effort and judgment, and stress from iatrogenic risk) required for that service in comparison to all other services. HCFA developed the practice expense RVUs, using historical charges for each code and estimates of the average portion of total revenues that physician specialties attributed to their practice expenses (e.g., equipment, rent, and salaries for ancillary personnel). Similarly, malpractice expense RVUs were also developed by HCFA. The total RVU for each CPT code

represents a value indexed to an intermediate office visit which has 1.0 total RVUs.

Physician service fees under the MFS are calculated from the following equation:

$$FEE_{iL} = CF \times GAF_{iL} \times (RVU_{w,i} + RVU_{pe,i} + RVU_{m,i}) \quad (1)$$

where i is the i th service or procedure; GAF is a procedure- and location-specific geographic adjustment factor comprised of the weighted average of three indexes—physician work, practice expenses, and malpractice expenses—based on the Geographic Practice Cost Indexes (GPCI); and CF is the national conversion factor to convert the sum of the three $RVUs$, multiplied by the respective GAF , into dollars. Medicare's total RVU is the sum of the three RVU components. In the formulas, each RVU component is indicated with a subscript: subscript w indicates physician work involved in performing service i ; subscript pe represents practice expenses associated with service i ; and subscript m represents physician malpractice expense for service i . $RVUs$ vary by procedure while each procedure-specific GAF varies by Medicare payment locality L of which there are over 200 pricing localities based mainly on administrative units created by HCFA to administer the Medicare program.

This method of calculating physician service fees using RBRVS is intended to make payments for physician services across service types, specialties, and locations more equitable by reflecting estimated resource costs into the payment. Under the CPR system, payments reflected charges, rather than resource costs that contributed to incentives to provide more costly diagnostic and surgical procedures versus cognitive and primary care services. The MVPS in the MFS are designed to control the rate of expenditure growth by

²Throughout this article, "RBRVS" and "Medicare's RBRVS" are used interchangeably as our focus is on the RBRVS developed for and used first by the Medicare program. The acronym MFS is used when referring to the broader concept of Medicare's physician payment system which combines RBRVS and Medicare physician payment policies.

setting physician annual payment updates (through changes in the CF) according to the difference between actual national physician expenditure growth in a given year and its established target. Targets are adjusted to account for changes out of the control of physicians such as beneficiary population and technology development. Thus, the MVPS are aimed at controlling costs by reducing the growth in the volume of physician services. Balance billing limitations are designed to protect Medicare beneficiaries from increased financial liability for physician services. That is, physicians are prohibited from billing patients directly for an amount in excess of an established percent of the Medicare-allowed charge.

Application of RBRVS beyond Medicare may have important implications for the distribution of physician reimbursement and services in the United States because the Medicare RBRVS is expected to redistribute payments away from invasive surgical procedures and diagnostic testing to evaluation and management services. Early patterns of RBRVS adoption across different payers may portend the feasibility of broader use. These patterns signal specific strengths and weaknesses of Medicare's RBRVS and possible long-term implications for access to care in a multipayer environment. The spread of Medicare's RBRVS may parallel the diffusion of other Medicare payment methodologies. For example, Medicare implemented the prospective payment system (PPS), which pays hospitals for acute inpatient stays by Medicare beneficiaries according to diagnosis-related groups (DRGs), in fiscal year 1984. Since then, 21 State Medicaid programs and about two-thirds of Blue Cross/Blue Shield (BC/BS) Association Member Plans have adopted the DRG payment system to varying degrees (Carter et al., 1994).

This article examines the diffusion of RBRVS to various payers; payers' perceptions, goals, and expectations of RBRVS; and how these payers use RBRVS and other payment policies developed under Medicare's physician payment reform. We also discuss the implications of expanded use of Medicare's RBRVS.

DATA AND METHODS

Survey of Payers

During the spring of 1993, a mail survey containing over 50 questions about methods used to pay for physicians' services was sent to 1,923 health care payers.³ The sampling frame included traditional indemnity insurers, managed-care organizations⁴ (e.g., health maintenance organizations [HMOs] and preferred provider organizations [PPOs]), BC/BS organizations, third-party administrators, self-insured employers, and State Medicaid programs.⁵ The 333 respondents, described in Table 1, represent a wide spectrum of organizations.⁶ Several smaller or less formal surveys on the diffusion of Medicare's RBRVS and physician payment policies have been conducted by other organizations (e.g., PPRC, BC/BS Associations, State

³Survey data analyzed in the study were acquired from Deloitte & Touche (Boston Office) in conjunction with a larger research effort they were undertaking. Because of confidentiality concerns, Health Economics Research, Inc. was provided only aggregate information from this survey.

⁴A managed-care organization is a health plan that attempts to control or coordinate use of health services by its enrolled members in order to contain health expenditures, improve quality, or both. Arrangements often involve a defined delivery system of providers with some form of contractual arrangement with the plan.

⁵Deloitte & Touche purchased data bases for the first four payer types from Charles J. Singer & Company. Self-insured employers and State Medicaid programs were subsequently merged onto the file by Deloitte & Touche. The groups are mutually exclusive. Respondents self-selected their payer category at the outset of the survey. Ten respondents did not choose one of the categories provided and were coded as "other."

⁶The data collection timeline did not allow for systematic followup (such as additional mailings or using incentives to increase participation), which is a recommended approach to improving response rates, especially in mail surveys (Dillman, 1978).

Table 1
Payer Organizations in the Original Survey

Payers ¹	Sampling Frame	Respondents
Total ²	1,923	333
State Medicaid Programs	51	32
Indemnity Insurers	131	27
Blue Cross/Blue Shield Organizations	64	24
Health Maintenance Organizations (HMOs)		
Individual Practice Association (IPA)-Model ³	283	87
Staff/Group-Model	323	10
Preferred Provider Organizations (PPOs)	377	51
Third-Party Administrators	423	68
Self-Insured Employers	271	24

¹Respondents self-classified into payer types.

²Of the 333 respondents, 10 payers could not be classified strictly into any of the payer categories. One example is an exclusive provider organization which is a more rigid type of PPO and is closely related to an HMO that requires individuals to use only designated providers or be held fully accountable for fees.

³Some responses for IPA-model HMOs were provided by Independent Physicians Associations that provide administrative services to IPA-model HMOs.

SOURCE: Health Economics Research, Inc. analysis of Deloitte & Touche 1993 resource-based relative value scale survey of payers.

government agencies), though none has collected as much information in terms of depth or sample size as the one analyzed here.

The survey instrument was designed to address several important research questions:

- What are the significant patterns in the diffusion of Medicare's RBRVS and related payment policies by payer type?
- What are payers' goals, expectations, and perceptions of Medicare's RBRVS and physician payment policies?
- How were payers' RBRVS-based fee schedules developed?
- What modifications to RVUs and Medicare's physician payment policies were made by payers?
- How did payers incorporate Medicare's RBRVS and other MFS elements into their cost-containment strategies?

First, respondents were classified into three distinct categories: "adopter," "non-adopter," and "considerer." We defined an adopter as any payer that had already implemented, was in the process of implementing, or was developing a payment system based on Medicare's RBRVS. A non-adopter was defined as any payer that had not begun adoption or had not considered it. Those indicating that an RBRVS-based

payment system was under consideration were categorized as considerers.

The survey asked payers several questions about their characteristics, such as type and size of the organization (in terms of number of enrollees or covered lives) and number of providers, total physician expenditures, geographic coverage area, et cetera. These key organizational dimensions were used to make comparisons of the adopters and non-adopters.

Because payers may offer multiple product lines⁷ (not all of which may utilize the same payment mechanism), the survey inquired about the types of product lines offered by the payer and which ones were affected by Medicare's RBRVS and related payment policies. We wanted to know if payers were "pilot testing" Medicare's RBRVS in one or two product lines before making a wider application. The hypothesis was that payers may apply it only to a subset of their physicians or enrollees.

The second major research area concerned payers' goals, expectations, and perceptions of Medicare's RBRVS and physician

⁷By product line, we are referring to a specific health plan offered by a provider. Products generally differ in their cost and benefit structure.

Table 2
Comparison of Adoption Rates in the Original and Followup Surveys for Three Payers

Payer Type	Original Survey		Non-Respondent Survey	
	Number per Sample	Percent	Number per Sample	Percent
Survey Total	112/333	34	31/90	34
Three Payer Total	33/110	30	31/90	34
Indemnity	5/27	19	8/30	27
Preferred Provider Organization (PPO)	19/51	37	15/45	33
Medicaid	9/32	28	8/15	53

NOTE: The Deloitte & Touche followup survey consisted of contacts with 30 indemnity insurers, 45 PPOs, and 15 State Medicaid programs for a total of 90 payers.

SOURCE: Health Economics Research, Inc. analysis of Deloitte & Touche 1993 resource-based relative value scale surveys.

payment policies, including identifying factors that motivate payers to switch from their current payment method. All payers, regardless of whether or not they were adopters, were asked to indicate their perceptions of the benefits and drawbacks of using a payment system based on Medicare's RBRVS and related payment policies. Respondents ranked the importance level (high, moderate, and low) of some commonly cited benefits (e.g., rationalize physician payments) and potential drawbacks/problems (e.g., costs of system conversion).

We were especially interested in learning how payers had developed their RBRVS-based fee schedules. Payers were queried about the use of conversion factors and RVU modifications that were made or planned. Inquiries were made regarding the use of certain Medicare physician payment policies (e.g., surgical service definitions, site-of-service payment differentials, payment for assistant-at-surgery, et cetera). Finally, we focused on how payers incorporated RBRVS and other MFS elements into their cost-containment strategies. Volume performance standards and budget neutrality constraints were emphasized.

Followup Survey

Due to a low overall response rate, we employed two methods to alleviate concerns

about potential response and sample selection bias. First, a brief followup survey of randomly selected non-respondents from three payer groups—indemnity insurers, PPOs, and State Medicaid programs—was conducted approximately 1 month after the data collection ended. The purpose of the followup survey was to examine whether or not any systematic differences existed between the respondents and the non-respondents in terms of RBRVS adoption. Second, we conducted 12 case studies with a variety of organizations not included in either survey to further explore patterns found in the survey data.

Ninety payers were contacted during the time available to complete the followup survey. As shown in Table 2, the overall proportion of adopters in the followup survey was comparable to the overall proportion in the original survey, yet some differential existed within payer groups. The proportion of indemnity insurers in the followup survey adopting an RBRVS-based system was slightly higher (8 percent) and noticeably higher for Medicaid programs (25 percent) when compared with the proportion of adopters in the original survey. When data from the original and followup surveys and case studies were combined, nearly all Medicaid programs were contacted. Thus, we were able to calculate the true

diffusion rate in the Medicaid sector—which was approximately halfway between the two survey rates.⁸ For PPOs, the difference in adoption rates was 4 percent lower in the followup group. Within the four geographic regions of the United States, diffusion rates between payers in the original and followup samples differed between 4 and 15 percent (with the South and West at the respective extremes).

Concern over non-response bias was not completely mitigated by the followup survey for two reasons, which serve as limitations to the study. First, only three payer groups were resurveyed due to resource constraints. Thus, it is questionable whether findings from the non-resurveyed payer groups should be generalized beyond the actual survey participants. Second, although comparable diffusion rates were found, the followup survey did not have a 100-percent response rate. Both the original and followup surveys, therefore, may suffer from response bias. The direction of the bias is likely to be positive, suggesting that the results of the survey are likely to overestimate the actual diffusion of Medicare's RBRVS. The primary reason for the positive influence on adoption rates is that payers interested in or using Medicare's RBRVS would be more likely to participate in the survey.⁹

Case Studies

We also conducted case studies of 12 payers—6 public and 6 private—actively involved in the use, implementation, or analysis of Medicare's RBRVS to verify that patterns identified through the survey were consistent. In the public sector, case study organizations included State Medicaid programs

in Michigan, Virginia, and Washington State; the West Virginia Workers' Compensation Fund; the Federal Office of Workers' Compensation Programs; and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). The six private-sector participants included three indemnity insurers and three PPOs. The case study methodology included telephone interviews with key officials in each organization. Using payer-specific topic guides, detailed information was collected on: payers' use and perception of Medicare's RBRVS and related payment policies, and the development and implementation of alternative RBRVS-based payment systems. The case studies supplemented some areas not explored by the survey and probed into the technical development payers were undertaking, including updated methodologies and implementation schedules.

RESULTS

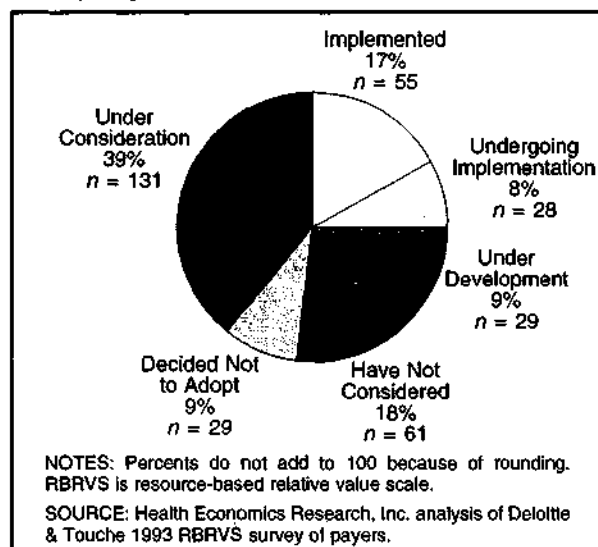
Payment systems based on Medicare's RBRVS were found to exist across payers in both the public and private sectors. Among the 333 responding payers, one-third ($n = 112$) had adopted Medicare's RBRVS in some fashion for at least one of their product lines. Payers' use of RBRVS ranged from full-scale implementation to various limited applications. Limited applications included a fee screen for overvalued procedures used by CHAMPUS, a fee screen to set maximum allowed charges used by some PPOs, and the interim use approach by the Arizona Medicaid program which pays providers according to RBRVS fees for program beneficiaries not yet enrolled in a managed-care plan.

About one-half of the adopters in the survey had already completed implementation according to their plan while the other half were still developing their plan or

⁸Some information on Medicaid programs reported in this article reflects data collected by all three methods.

⁹See McCormack et al., 1993 for a more detailed discussion of the authors' methodology and findings.

Figure 1
Extent to Which Non-Medicare Payers Were Adopting an RBRVS-Based Payment System



implementing it (Figure 1). The largest group was the 131 respondents considering adoption at the time of the survey. Because of the significant size of this group, we anticipate that RBRVS-based payment systems will spread even further into new markets. The majority of non-adopters had yet to consider or analyze a payment alternative involving RBRVS.

ORGANIZATIONAL CHARACTERISTICS

Adopters were diverse in terms of organizational type, geographic location, and size. Figure 2 shows that, within payer type, the highest proportions of adopters were found in BC/BS organizations (79 percent),¹⁰ independent practice association (IPA)-model HMOs (50 percent), and PPOs (38 percent). As expected, the adopters did not include any staff-model HMOs because these physicians are employees of the

organization and are paid on a salary basis. On the other hand, IPA-model HMOs and PPOs contract with networks or panels of physicians to furnish services and are generally paid on a fee-for-service basis using a negotiated fee schedule.

Among public-sector payers, 16 Medicaid programs implemented payment systems based on Medicare's RBRVS, while another 4 were using it in a limited fashion such as a fee screen. An additional 11 States were considering its use (Table 3). Taken together, the Medicaid programs adopting RBRVS "full-scale" were paying approximately 120,000 physicians for services provided to approximately 12.6 million Medicaid enrollees. The number of physicians impacted by RBRVS has increased over time. Up from one-fourth of all physicians in the Medicaid program in November 1992 (Physician Payment Review Commission, 1993), approximately one-third were paid by a system similar to Medicare's in 1993.

The adopters tend to have specific structural and philosophical differences from their non-adopting counterparts. For instance, most managed-care and BC/BS plans use physician participation agreements whereby physicians agree to accept a payer's fee as payment in full. As a result, they are not concerned about the potential impact on beneficiaries from physician balance-billing practices. This concern was perhaps the single greatest barrier to adopting the payment system, even though balance billing is a policy decision distinct from RBRVS.¹¹ This concern was strongly reiterated in our case study analysis.

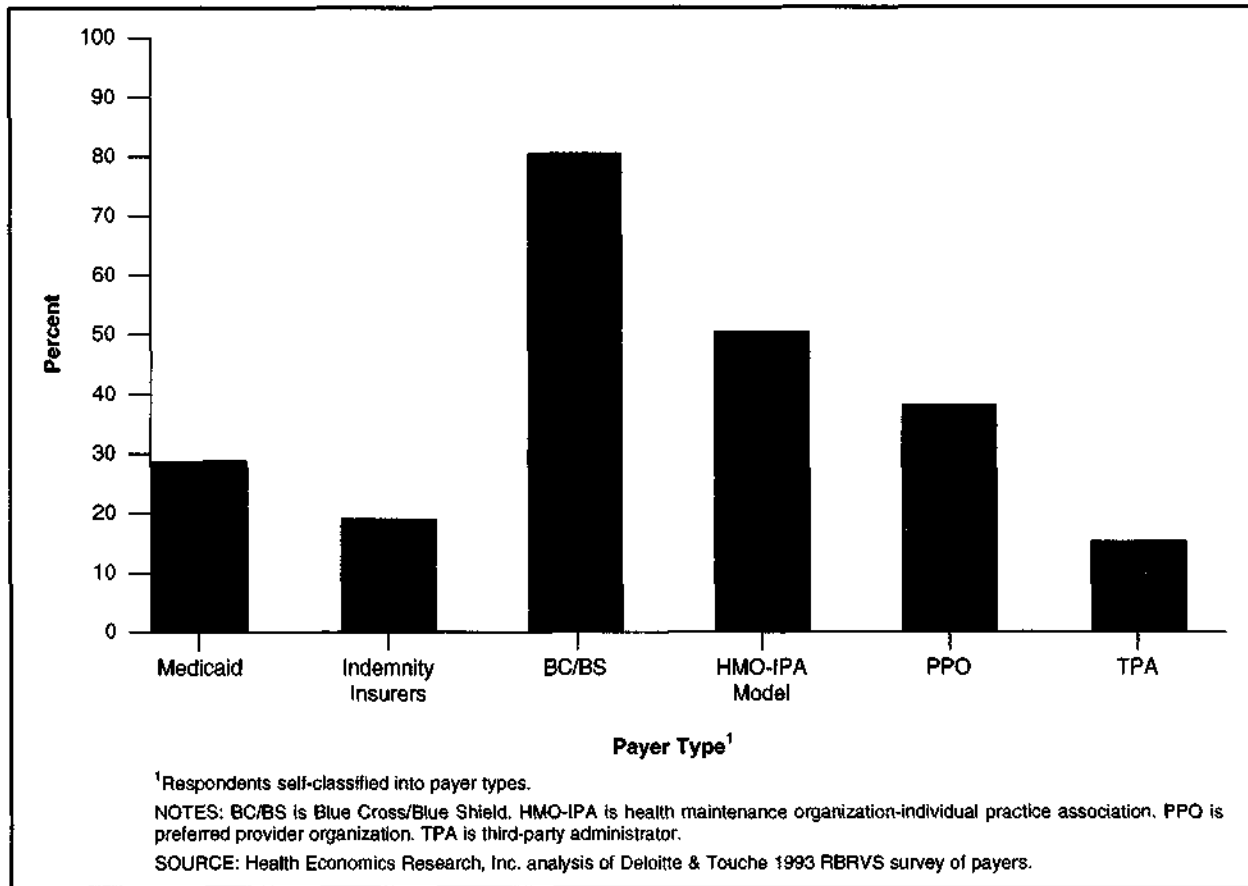
As shown in Table 4, the penetration of Medicare's RBRVS was more common in payers' managed-care products than in

¹⁰There are approximately 70 BC/BS organizations. Twenty-four responded to the survey and 19 were classified as adopters.

¹¹We found that payers generally did not consider balance billing a policy option separable from RBRVS. This viewpoint also was consistent with many payers' perception that the MFS and RBRVS were synonymous.

Figure 2

Respondents in Each Payer Category Adopting a Resource-Based Relative Value Scale (RBRVS)-Based Payment System



indemnity products. Many of the adopters had multiple product lines, but they were more likely to apply RBRVS to the managed-care subset of their business. Of the 201 products to which RBRVS was applied, 159 were managed-care (e.g., HMO, PPO, or point-of-service), while only 15 were traditional indemnity products. When adopted by an organization, the system was generally applied to all physicians and all enrollees within the affected product line.

Certain organizational characteristics, such as a payer's size and geographic region, appeared to be associated with the adoption of MFS. On average, adopters had more enrollees (550,000) and significantly higher annual physician service expenditures (\$143

million) when compared with the non-adopters (157,000 and \$46 million, respectively). Slightly higher penetration of RBRVS was observed in the Midwestern and Western parts of the United States where the penetration of managed care is high, particularly in California, Washington, Minnesota, and Wisconsin (American Medical Association, 1990). Economic theory would suggest that greater market share, as evidenced by a payer's larger size, is advantageous for negotiating payment terms or changing prices (Varian, 1984). Another reason larger organizations might be more likely to adopt RBRVS is their access to necessary financial resources or technical expertise. However, only one out of five

Table 3
Diffusion of Resource-Based Relative Value Scale (RBRVS)-Based Payment Systems Into State Medicaid Programs

Under Consideration (n = 12)	Under Development/ Implementation (n = 7)	Implemented (n = 9)	Decided Not to Adopt (n = 8)	Have Not Considered (n = 8)	Limited Use (n = 4)
Alaska	Connecticut	Arizona ¹	Kansas	Alabama	Hawaii
California	Florida	Georgia	Louisiana	Arkansas	Iowa
Colorado	Indiana	Michigan ²	New Jersey	District of Columbia	Massachusetts
Kentucky	Ohio	Mississippi	South Dakota	Idaho	Maine
Maryland	Rhode Island	North Carolina	Tennessee	Illinois	
Minnesota	Utah	Oklahoma	Vermont	Nebraska	
Montana	West Virginia	Oregon	Wisconsin	New Hampshire	
Nevada		Texas	Wyoming	Pennsylvania	
New York		Washington ²			
North Dakota					
South Carolina					
Virginia ²					

¹Most of Arizona's Medicaid enrollees are in managed-care plans. RBRVS is applied only to services provided to those recipients temporarily outside a managed-care network.

²Included in Health Economics Research, Inc. case study effort.

NOTES: Missouri, Delaware, and New Mexico did not respond to the surveys. Puerto Rico and the U.S. Virgin Islands were not sampled. Total n is 48.

SOURCES: Health Economics Research, Inc. analysis of Deloitte & Touche RBRVS surveys and Health Economics Research, Inc. case studies.

nationwide payers¹² that responded to the survey had adopted an RBRVS-based system.

BENEFITS AND DRAWBACKS OF RBRVS

Both adopters and non-adopters agreed that many of the potential benefits/goals of RBRVS were attractive to them, but each group perceived their importance differently. Figure 3 shows how the adopters and non-adopters ranked some of the potential benefits of RBRVS. Adopters consistently ranked each benefit higher vis-à-vis non-adopters, but indicated that an RBRVS-based system's ability to rationalize physician payment and reward primary care physicians were most appealing. In fact, two-thirds of the adopters selected rationalizing physician payments as being "highly important," while only one-third of their counterparts did. It appears that a strong desire to restructure their payment

system in favor of primary care is an important characteristic that distinguishes the adopters from the non-adopters.

We found widespread expectation among both adopters and non-adopters that an RBRVS-based system would control rising physician service expenditures. Nearly one-half of both groups selected it as a significant benefit. This finding is surprising because RBRVS was not designed principally as a cost-containment tool. Rather, its major purpose is to base physician payment for each service on the required resources relative to all other services. Consequently, payments are expected to be made more equitable by redistributing them away from historically overvalued specialty procedures and diagnostic testing to evaluation and management services.

Under a budget-neutral scenario, there would be no impact on overall spending in the short term, assuming no provider behavioral responses. However, such a major change in payment policy involves up-front costs required for system conversion by payers. It is possible that savings may be achieved by payers over the longer

¹²Some payers, especially large indemnity insurers, provide services through separate physician networks located across the country. These payers were classified as "nationwide" because of their national presence in the insurance market. All other payers were grouped into one of the four traditional regional categories.

Table 4
Diffusion of Resource-Based Relative Value Scale (RBRVS)-Based Payment Systems Into Private Payers' Health Insurance Product Lines¹

	Number of Products to Which RBRVS was Applied, by Type of Product					
Payer Type	Total Products	Traditional Indemnity Product	Managed Indemnity Product	HMO Product	PPO Product	Point-of-Service Product
Total	210	15/201	27/201	56/201	57/201	46/201
Percent of Total	100	7	13	28	28	23
Indemnity Insurers (<i>n</i> = 5)	9	0	2	2	4	1
Blue Cross/Blue Shield (<i>n</i> = 16)	55	10	12	9	14	10
HMO-IPA (<i>n</i> = 43)	85	1	6	41	12	25
PPO (<i>n</i> = 19)	27	0	1	2	19	5
TPA (<i>n</i> = 10)	25	4	6	2	8	5

¹Product line refers to a specific health plan offered by a provider. Products generally differ in their cost and benefit structure. A payer may offer more than one product line.

NOTES: Number of adopters in each payer category is shown in parentheses. HMO is health maintenance organization. IPA is individual practice association. PPO is preferred provider organization. TPA is third-party administrator.

SOURCE: Health Economics Research, Inc. analysis of Deloitte & Touche 1993 RBRVS survey of payers.

term as the diminished incentives to provide costly surgical and diagnostic procedures take effect. Yet, behavioral responses, such as volume increases by physicians to achieve target incomes, may influence the overall redistribution of payments and services, possibly eliminating any potential expenditure savings from realigning physician service prices under RBRVS.

Not surprisingly, payers adopting RBRVS-based systems generally viewed the system to have very few drawbacks (Figure 4). The greatest concern, reported by 14 percent of adopters, was disruption of physician relations (e.g., their physician retention rate and satisfaction levels). Non-adopters cited the relative newness of the system as an important factor in their decisionmaking (43 percent), followed by conversion costs (33 percent), lack of technical and administrative expertise (30 percent), and disruption of physician relations (27 percent).

The primary concern with RBRVS by Medicaid programs was the absence or perceived inadequacy of RVUs for many of their high-volume services. Medicaid programs are confronted with this issue since they provide preventive services as

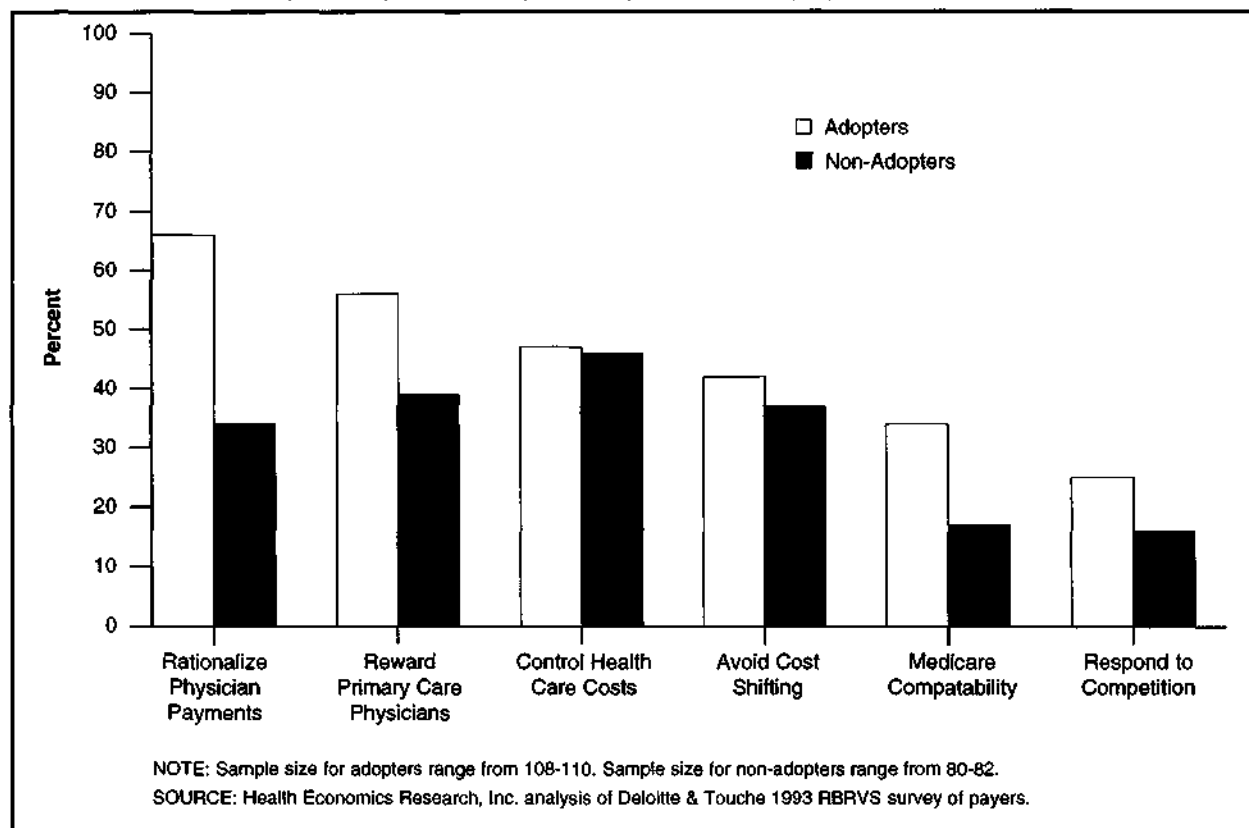
well as other services that are not covered by the Medicare program, and they serve very different populations. Some Medicaid programs, including those in Georgia and North Carolina, exempt certain services from their RBRVS-based systems, continuing to pay for them at pre-RBRVS rates or on a charge basis (Panton, 1994; Fletcher, 1994).

PROGRAM DESIGN

Most payers in the study did not adopt RBRVS until late 1992 or early 1993. Nearly one-third of the adopters were using a transition process, allowing more time to decide upon final policy parameter specifications. Phase-in periods varied by payer type, ranging from several months to 5 years. Several payers that were using phase-in periods had not finalized important policy decisions.

Some payers adopting RBRVS-based payment systems were not using Medicare's conversion factors or MFS payment policies. In addition, some payers were not using Medicare's RVUs for selected services such as obstetrical care. Rather, they tailored Medicare's RBRVS and MFS policies to their own needs and circumstances.

Figure 3
Percent of Payers Reporting the Perceived Benefits of a Resource-Based Relative Value Scale (RBRVS)-Based Payment System as "Highly Important"



Of the 112 adopters, only 20 percent had opted to use Medicare's conversion factors (CFs), although less than one-half of the adopters had made a decision regarding the exact CFs that they would use at the time of the survey. Nearly 60 percent determined that they would use multiple CFs to convert RVUs into dollars. The most common basis used to determine multiple CFs is geography, but "areas of medicine" and "physician specialty" were also cited. A few Medicaid programs are using a separate CF for obstetrical services, citing this as a way to fulfill requirements under the OBRA 1989 equal access provision. Of the case studies participants, most of the private sector payers were using multiple CFs that were applied to medical and surgical service categories. One private payer was

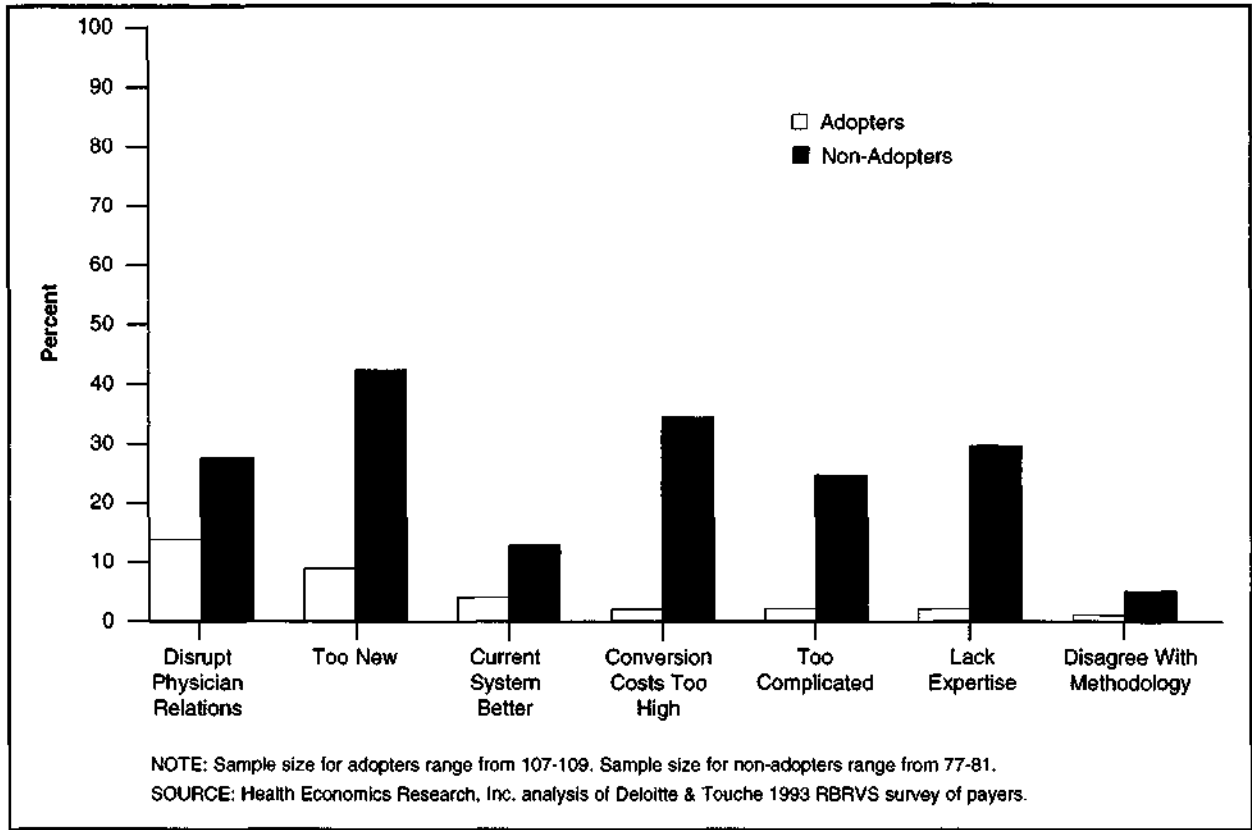
using CFs that resulted in payment levels approximately 150 percent higher than Medicare's fees.

Payers are clearly divided over modifying Medicare's RVUs. One-third of the adopters made changes to some RVUs, a similar proportion did not make changes, and another one-third were undecided. The groups of services commonly modified include obstetrics/gynecology (OB/GYN), pediatrics, and pathology.

Across most payer types, Medicare payment policies on global surgical service definitions and the payment method for assistants-at-surgery were implemented by one-half of the adopters. Figure 5 shows that significant uncertainty exists regarding all payment policies identified in the survey instrument. For each policy or

Figure 4

Percent of Payers Reporting the Perceived Drawbacks of a Resource-Based Relative Value Scale (RBRVS)-Based Payment System as "Highly Important"

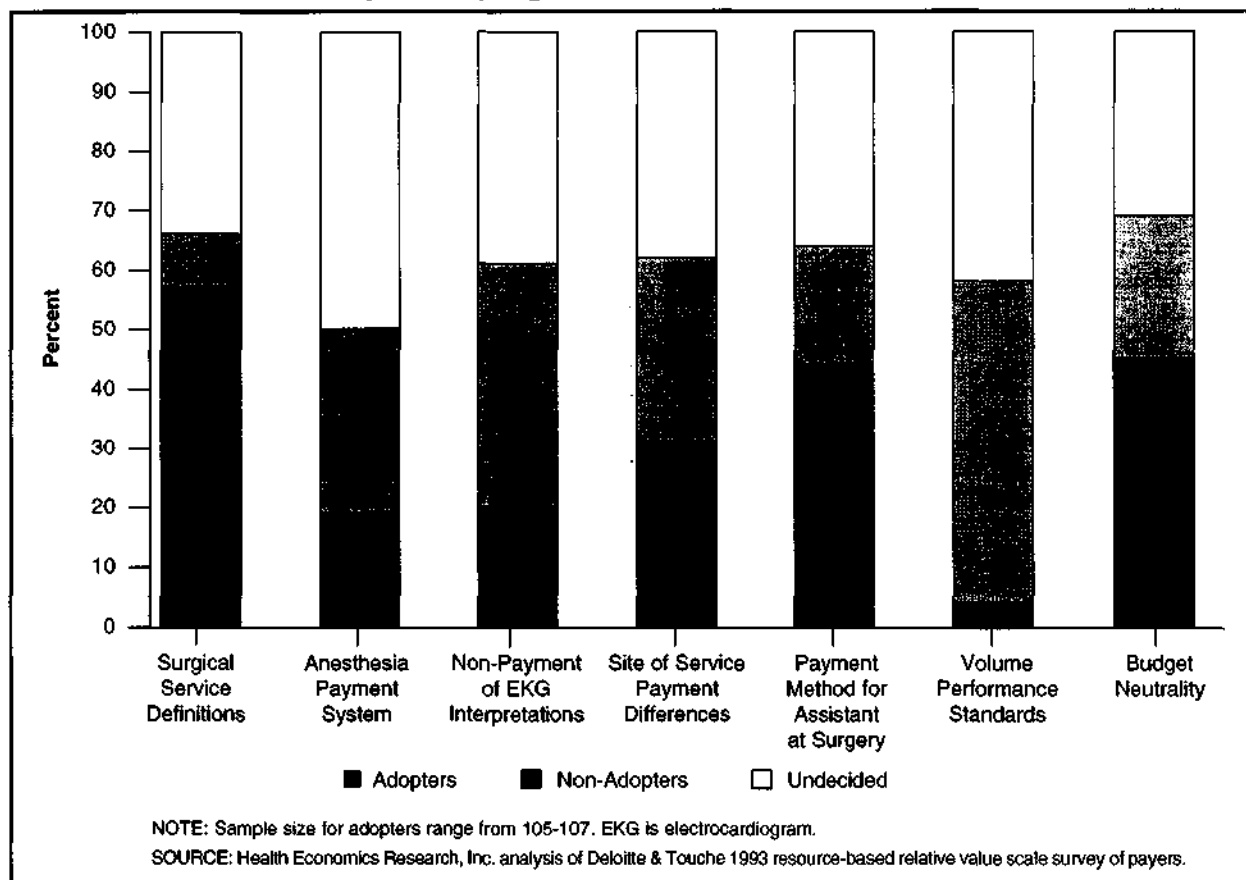


system decision, more than one-third of the adopters were still undecided about using it. For instance, approximately one-third of the adopters were undecided about using Medicare's global surgical service package definitions, about 45 percent were not sure whether they would use Medicare's anesthesia payment system, and about one-third of adopters were undecided about using budget-neutral CFs. This uncertainty appears to be consistent with the decision by many payers to transition into an RBRVS-based payment system, allowing time for decisionmaking on these issues.

System decisions such as whether or not to establish volume performance standards and budget neutrality constraints (i.e., where total physician payments will not differ from those

that would result from a continuation of the current system) may have the greatest influence on expenditure outlays, both in the short run and long run. Although the survey and case study analyses consistently revealed a desire by payers to use RBRVS to contain costs, budget neutrality was supported by only about 40 percent of the adopters. Adoption of this policy varied according to type of payer, however, with BC/BS organizations using it to the greatest extent. Two of the three Medicaid program case studies and the Federal Office of Workers' Compensation Programs are using a budget neutral CF. Similarly, fewer than 5 percent of survey respondents and no case study participants reported adopting MVPS. Information about update protocols for RVUs and CFs was drawn from the case

Figure 5
Percent of Payers Adopting Selected Medicare Fee Schedule Policies



studies. Several payers planned to update RVUs along with Medicare, but formal update protocols for CFs had generally not been developed. One exception was the Washington State Medicaid program, whose CF update will depend largely on its legislature.

CONCLUSIONS AND POLICY IMPLICATIONS

Analysis of recent survey data and case studies reveals that Medicare's RBRVS has spread into both public and private sector payers since its inception, though payers have determined that specific parts of the MFS are inappropriate for their program. Also, it appears that RBRVS-based payment systems are being applied predominantly to

managed-care products in which balance billing is not an issue for beneficiaries' out-of-pocket liability. This finding is significant given the short period of time since Medicare's implementation of the MFS, the amount of resources needed to restructure a payer's payment system, and the continued growth of managed care in the health care industry. Clearly, a driving force behind the rapid adoption of this system is the rationalization of payment. Given the shift in payments toward primary-care services and the emphasis given to primary care by managed-care organizations, it is not surprising that diffusion rates have been most rapid in the managed-care marketplace. This also could explain some of the difference in adoption rates across geographic areas.

One important distinction between Medicare and other payers adopting RBRVS is the integration (or non-integration) of RBRVS into their cost-containment strategies. Only about 40 percent of adopters decided to implement a budget-neutral system (although some payers had yet to make a decision) and significantly fewer had established volume performance standards. Some case study payers, especially those with large provider networks, see RBRVS as an important management tool for creating physician profiles on volume and intensity of services, and subsequently controlling the growth in costs. Other payers viewed the adoption of RBRVS as a way to minimize cost shifting. They were concerned that if they did not adopt an RBRVS-based system, physician charges might increase in an effort to offset reductions in fees by other payers that did adopt it. These different approaches to cost containment may result in differences in the growth rate of physician service expenditures between Medicare and other payers.

The long-term implications from expanded use of RBRVS on the distribution of services, reimbursement, and cost shifting across payers will depend largely on the uncertain dynamic interactions and impacts from multiple payers using the system. It is not certain, for example, what effect broader use of RBRVS will have on the volume of specific procedures or services for a particular population, or the total impact on individual specialty or physician reimbursement. Increased use of RBRVS may lead to results that magnify or mitigate the original expectations of RBRVS. For instance, the basic premise of RBRVS—to base fees for physician services on required resources relative to other services—leads to a redistribution of payments away from surgical procedures and diagnostic testing to evaluation and

management services. Given these incentives, one expectation is that incomes for surgeons and specialists would decline, while incomes for primary care physicians would rise. The predicted aggregate impact on any given specialty is likely to be magnified when multiple payers' fee schedules are based on RBRVS, even if conversion factors differ by payer. On the other hand, a "volume effect" may occur within and across payers whereby providers respond to fee reductions by increasing the volume of other services differentially within and across payers. Such a response would result in an overall change in service volume and reimbursement far different than expected under RBRVS (McGuire and Pauly, 1991). Volume effects across payers might be driven by different payment policies, conversion factors, relative value units, and balance billing limits.

In the short run, the potential for increased use of RBRVS appears to be substantial, given the adoption rates across various payer types and the large proportion of payers currently analyzing its feasibility. This is especially relevant to geographic regions with a larger penetration of managed-care products in the marketplace. In addition, RBRVS has broad appeal as evidenced by the different types of public and private payers using it and its various applications. However, the structure of physician service markets may dictate how RBRVS is used by payers and what payment policies will accompany it in the longer run.

This study advances the state of knowledge on the extent to which an important Medicare payment methodology, the RBRVS, has spread to various health care payer organizations. However, caution must be used when generalizing this study's results because of low response rates for some payer types. Also, the survey and case

studies were conducted shortly after Medicare's implementation of the MFS and before the outcome of the 1994 national health care reform debate was known. In addition, we were unable to explore payers' use patterns along a wider array of payment policy and technical issues. Future research using a larger sample of payers and more detailed questions on RBRVS-based payment systems is needed to fully examine the extent of RBRVS and MFS payment policy use by payer, product line, and geographic region. Future studies could also analyze the impacts on payers, providers, and beneficiaries from multiple payer use of Medicare's RBRVS.

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